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Figure 1. The effect of the number of iterations (n) on the accuracy of the proposed algorithm. The results are shown for different values of α and β . The x-axis represents the number of iterations (n), ranging from 0 to 100. The y-axis represents the error, ranging from 0 to 1. The legend indicates three cases: $\alpha = 0.5, \beta = 0.5$ (blue line with circles), $\alpha = 0.7, \beta = 0.3$ (red line with triangles), and $\alpha = 0.9, \beta = 0.1$ (green line with squares). In all cases, the error decreases as the number of iterations increases, with the rate of decrease being higher for larger values of α .

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assembling and sintering said first conductive layer/ said first

dielectric layer/ said ground plane/said second dielectric layer/said power plane/said third dielectric layer/ said third conductive layer together;

patterning said first conductive layer and said third conductive layer to form connective trace layers; and

5 performing a plating through hole process to connect said via holes to said connective trace layers and said power plane and ground plane.

2. The method of claim 1, further comprising at least one power ring and one ground ring on one of said connective trace layers, said at least
10 one power ring and one ground ring respectively connecting to said power plane and ground plane.

3. The method of claim 1, further comprising filling another capacitor dielectric material into said via holes to form capacitors with different
15 capacitance.

4. A multi-layered substrate structure, comprising:
a assembled board with a top conductive trace layer/ a first dielectric layer/ a ground plane/ a second dielectric layer/ a power plane/
20 a third dielectric layer/ a bottom conductive trace layer stack, said assembled board having a plurality of plated through holes therein; and
said ground plane/ said second dielectric layer/ said power plane containing at least one built-in capacitor, said built-in capacitor being formed of a capacitor dielectric material in said plated through holes of
25 said second dielectric layer and having copper layers as capacitor plates,

